FIGURE 1

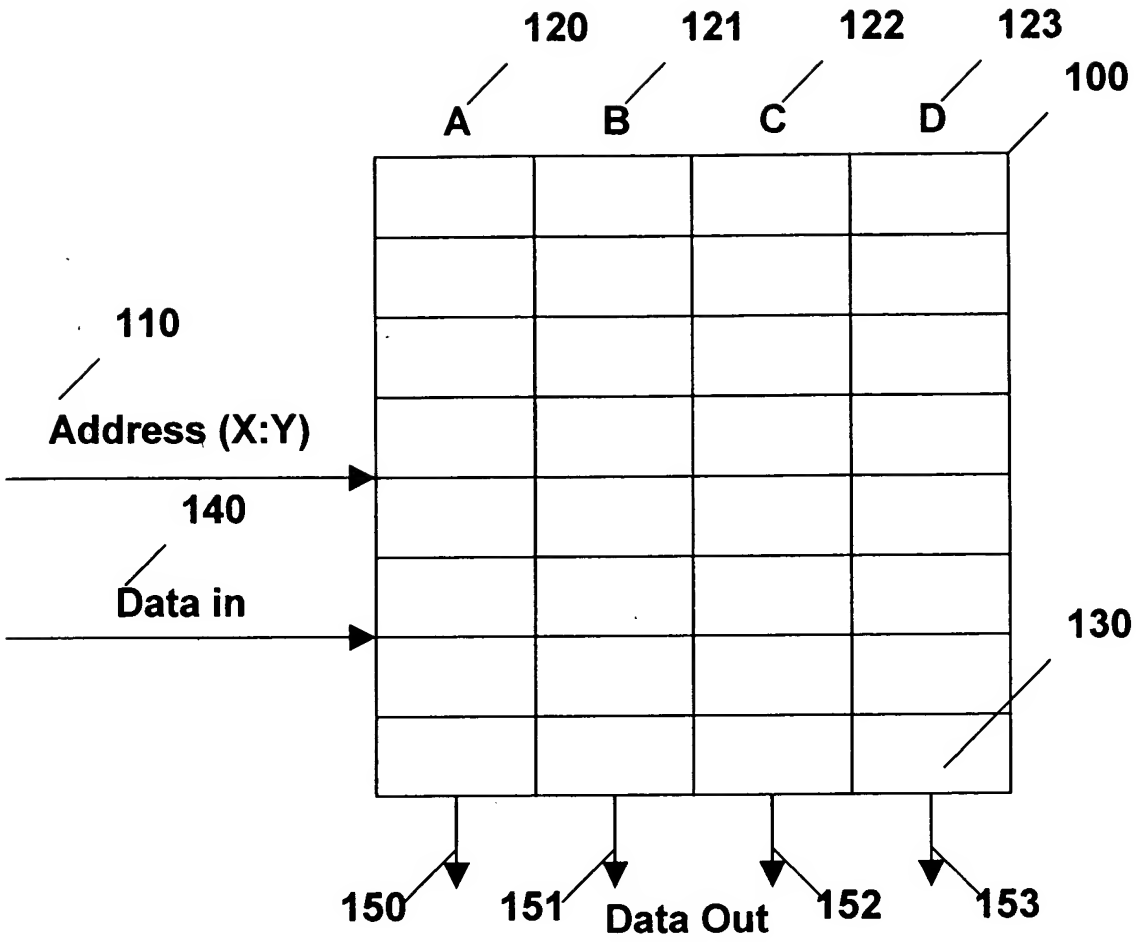

120
121
122
123
100
A
B
C
D
110
Address (X:Y)
140
Data in
130
150
151
Data Out
152
153

FIGURE 2

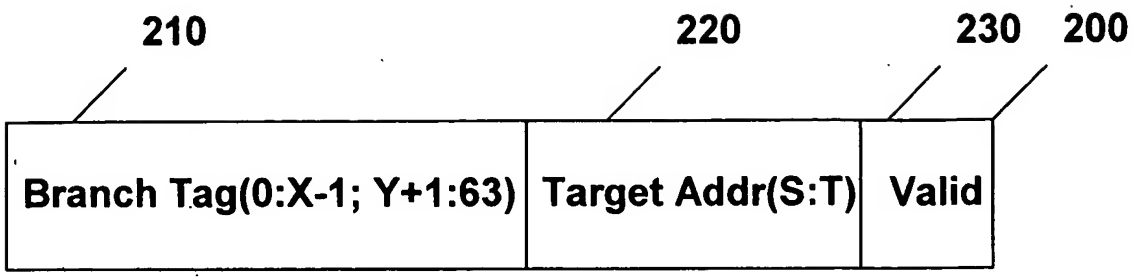


FIGURE 3

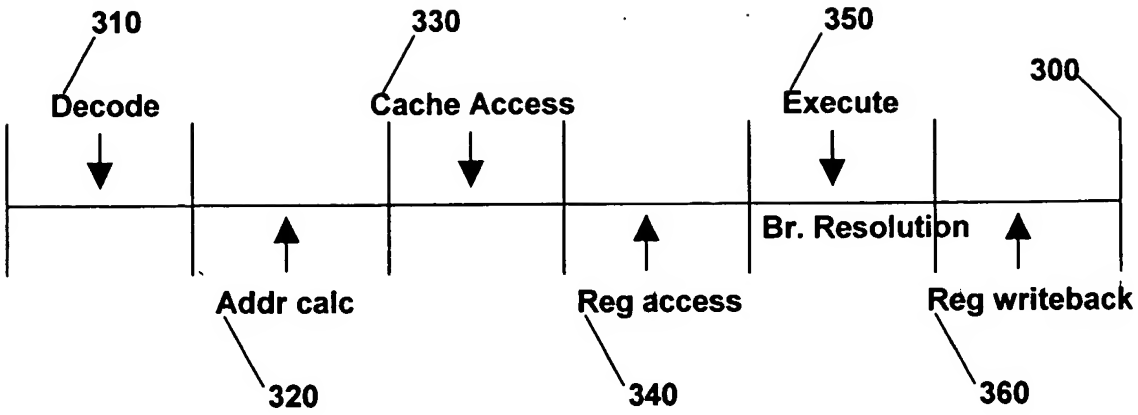

310
Decode
330
Cache Access
350
Execute
300
Br. Resolution
Addr calc
320
Reg access
340
Reg writeback
360

FIGURE 4

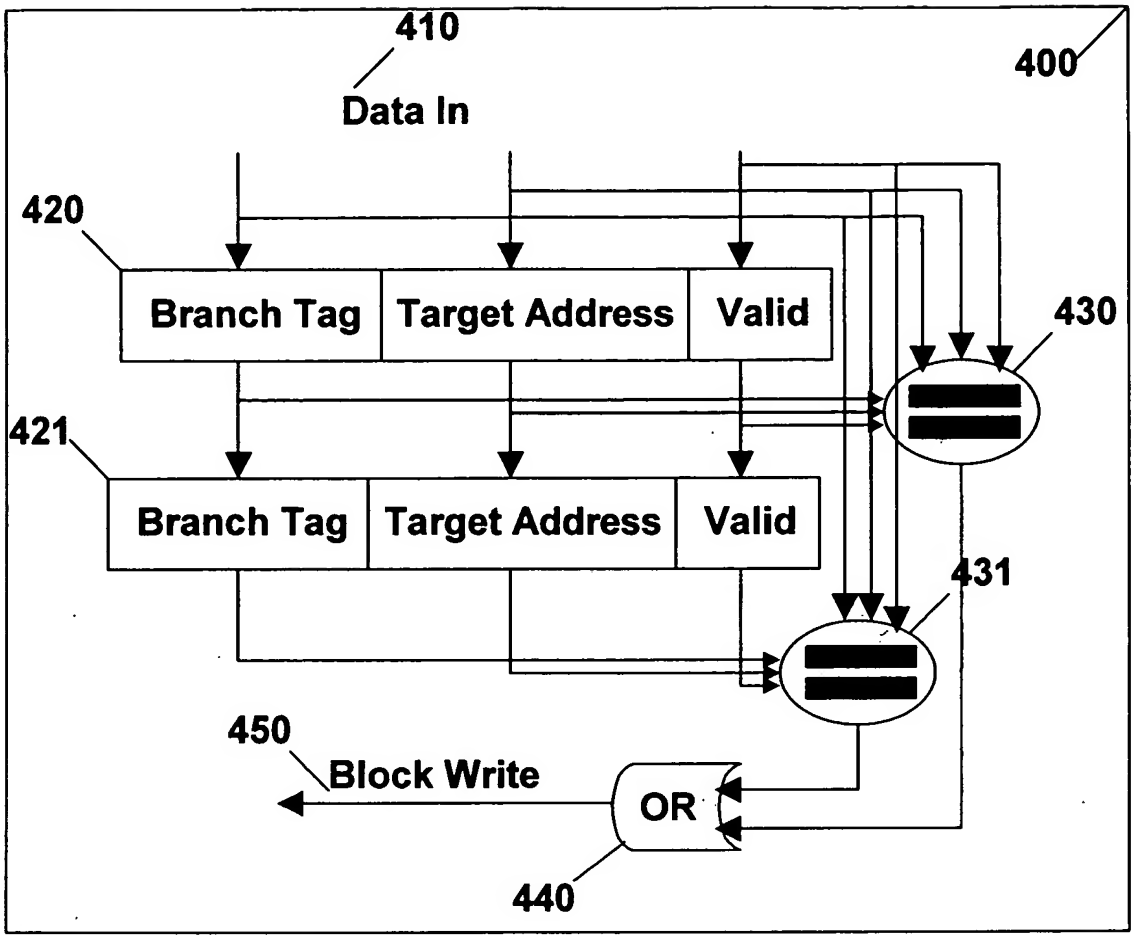

410
400
Data In
420
Branch Tag
Target Address
Valid
430
421
Branch Tag
Target Address
Valid
431
450
Block Write
OR
440

FIGURE 5

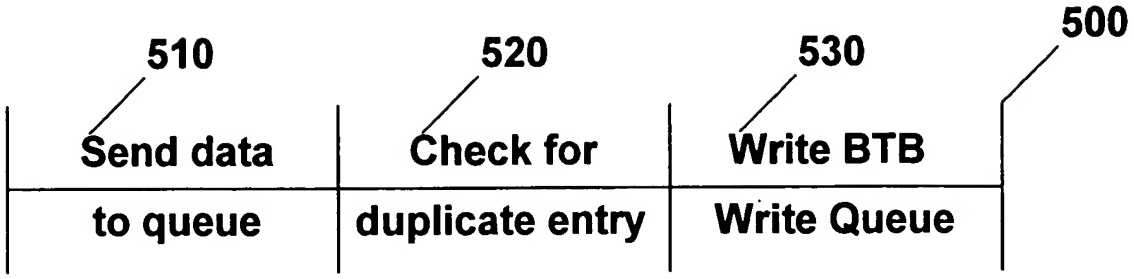

510
520
530
500
Send data to queue
Check for duplicate entry
Write BTB Write Queue

FIGURE 6

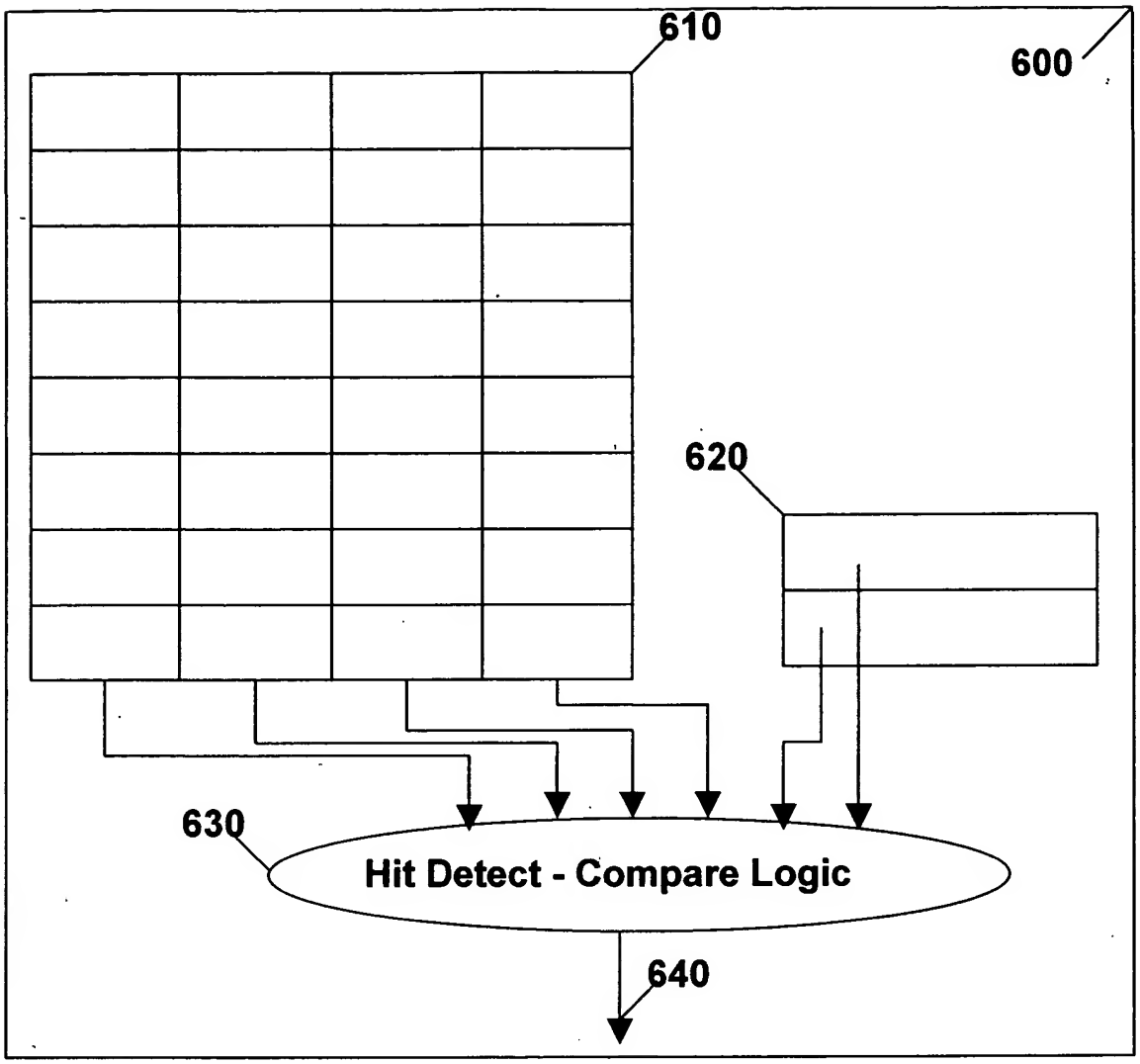
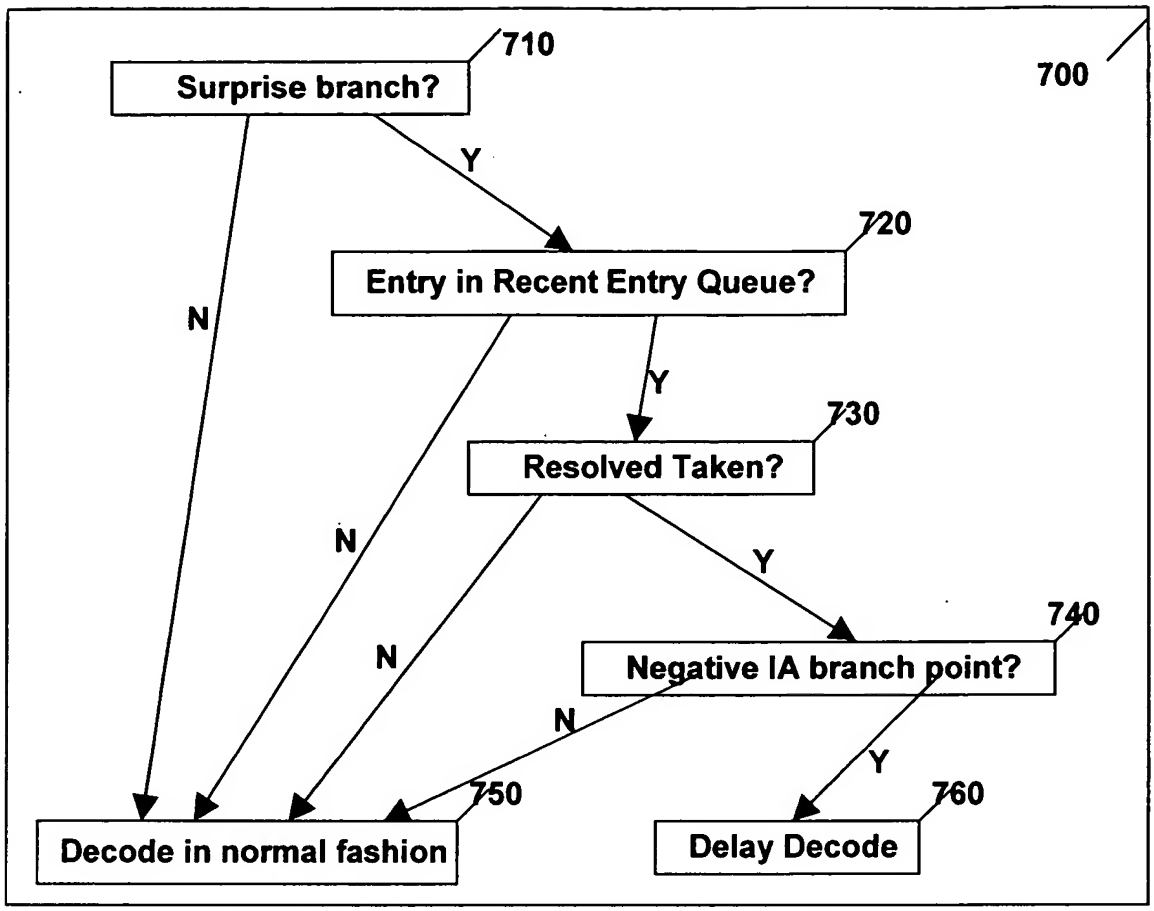


FIGURE 7


700
710
Surprise branch?
Y
N
720
Entry in Recent Entry Queue?
Y
N
730
Resolved Taken?
Y
N
740
Negative IA branch point?
Y
N
750
Decode in normal fashion
760
Delay Decode